Sorafenib improves survival of *FLT3*-mutated acute myeloid leukemia in relapse after allogeneic stem cell transplantation: a report of the EBMT Acute Leukemia Working Party

Ali Bazarbachi,[1,2] Myriam Labopin,[3,4,5] Giorgia Battipaglia,[4,6] Azedine Djabali,[3,4] Jakob Passweg,[7] Gerard Socié,[8] Edouard Forcade,[9] Didier Blaise,[10] Patrice Chevallier,[11] Corentin Orvain,[12] Jan J. Cornelissen,[13] William Arcese,[14] Sylvain Chantepie,[15] Khowla Hashaishi,[3] Jean El Cheikh,[1] Michael Medinger,[7] Jordi Esteve,[3,16] Arnon Nagler,[3,17] and Mohamad Mohty[3,4,5*]*

**AN and MM contributed equally to this work.*

[1]Bone Marrow Transplantation Program, Department of Internal Medicine, American University of Beirut Medical Center, Beirut, Lebanon; [2]Department of Cell Biology, Anatomy and Physiological Sciences, American University of Beirut, Beirut, Lebanon; [3]Acute Leukemia Working Party of EBMT, Paris, France; [4]Hematology Department, Hôpital Saint Antoine, Service d'Hématologie et Thérapie Cellulaire, Paris, France; [5]Hôpital Saint Antoine, Université Pierre and Marie Curie, INSERM, UMRs 938, Paris, France; [6]Hematology Department, Federico II University of Naples, Naples, Italy; [7]University Hospital, Hematology, Basel, Switzerland; [8]Hôpital Saint Louis, Department of Hematology – BMT, Paris, France; [9]CHU Bordeaux Hôpital Haut-leveque, Pessac, France; [10]Programme de Transplantation and Therapie Cellulaire, Centre de Recherche en Cancérologie de Marseille, Institut Paoli Calmettes, Marseille, France; [11]CHU Nantes, Department D'Hematologie, Nantes, France; [12]CHRU, Service des Maladies du Sang, Angers, France; [13]Department of Hematology, Rotterdam, the Netherlands; [14]Tor Vergata University of Rome, Stem Cell Transplant Unit, Policlinico Universitario Tor Vergata, Rome, Italy; [15]CHU CAEN, Institut d'Hématologie de Basse-Normandie, Caen, France; [16]Hematology Department, IDIBAPS, Hospital Clinic, Barcelona, Spain and [17]Chaim Sheba Medical Center, Tel-Hashomer, Israel

Correspondence: ALI BAZARBACHI - bazarbac@aub.edu.lb
doi:10.3324/haematol.2018.211615

Supplementary table 1: Pair-match analysis: patients and treatment characteristics

	Control **N (%)**	**Sorafenib** **N (%)**
Number of patients	30	30
Female	17 (57)	11 (37)
Age at transplant median; years (range)	48 (22-66)	47.6 (19-69)
Year of transplant median (range)	2012 (2010-2015)	2013 (2010-2015)
Time from transplant to relapse; months median (range)	4.2 (0.9-43.8)	2.6 (0.4-41.4)
Molecular profile NPM1	13 (46)	13 (43)
Karyotype [missing]	[2]	[0]
Favorable	1 (3)	0 (0)
Intermediate	23 (77)	25 (83)
Adverse	6 (20)	4 (13)
Number of inductions median (range)	1(1-3)	2(1-3)
CR after induction 1	21 (75)	17 (61)
Consolidation given	24 (80)	19 (66)
Follow-up after relapse for alive patients; months (range)	17.92 (5.41 - 52.79)	22.69 (3.84 - 67.77)

Supplementary table 2: Pair-match analysis, transplant characteristics

	Control N (%)	Sorafenib N (%)
Status at Transplant		
CR1	18 (60)	18 (60)
CR2	3 (10)	3 (10)
Active disease	9 (30)	9 (30)
Donor type		
Matched related donor	13 (43)	20 (67)
Matched unrelated donor	13 (43)	7 (23)
Haplo-identical	4 (13)	3 (10)
Conditioning		
MAC	21 (70)	21 (70)
RIC	9 (30)	9 (30)
In vivo TCD	15 (50)	15 (50)
Stem cell source		
BM	5 (17)	4 (13)
PBSC	25 (83)	26 (87)
Minimal residual disease		
MRD negative	17 (57)	10 (33)
MRD positive	13 (43)	20 (67)

CR= complete remission; MAC= myeloablative conditioning; RIC= reduced intensity conditioning' TCD= T cell depletion; BM= bone marrow; PBSC= Peripheral blood stem cell; MRD= minimal residual disease.